

# **Prevention of Postpartum Hemorrhage: Implementing Active Management of the Third Stage of Labor (AMTSL)**

**A Reference Manual for  
Health Care Providers**

**Introduction**



Copyright © 2007, Program for Appropriate Technology in Health (PATH). All rights reserved. The material in this document may be freely used for educational or noncommercial purposes, provided that the material is accompanied by an acknowledgement line.

Suggested citation: POPPHI. Prevention of Postpartum Hemorrhage: Implementing Active Management of the Third Stage of Labor (AMTSL): A Reference Manual for Health Care Providers. Seattle: PATH; 2007.

# **Prevention of Postpartum Hemorrhage: Implementing Active Management of the Third Stage of Labor (AMTSL)**

A Reference Manual for Health Care Providers

2007

## **Prevention of Postpartum Hemorrhage Initiative (POPPHI)**

This manual is made possible through support provided to the POPPHI project by the Office of Health, Infectious Diseases and Nutrition, Bureau for Global Health, US Agency for International Development, under the terms of Subcontract No. 4-31-U-8954, under Contract No. GHS-I-00-03-00028. POPPHI is implemented by a collaborative effort between PATH, RTI International, and EngenderHealth.

## **Table of contents**

|                    |   |
|--------------------|---|
| Introduction ..... | 5 |
| References .....   | 7 |

## Acknowledgements

This manual was funded by the Office of Health, Infectious Diseases and Nutrition, Bureau for Global Health, US Agency for International Development, under the terms of Subcontract No. 4-31-U-8954, under Contract No. GHS-I-00-03-00028.

The writing team of Frances Ganges, Diana Beck, and Susheela M. Engelbrecht is grateful to the following people, who provided invaluable assistance with this effort:

- Gloria Metcalfe, author of the first iteration of this and accompanying training materials.
- Contributing editors Deborah Armbruster, Sandy Buffington, Patricia Gomez, Meghan Greeley, Phyllis Long, Gloria Metcalfe, Setara Rahman, Sara Stratton, and Carla Spaccarotelli.
- Reviewers Sadiyah Ahsan, Rani Bang, Rachel Bishop, Martha Carlough, Annie Clark, Blami Dao, Annie Davenport, Barbara Deller, Abdelhadi Eltahir, Christina Kramer, Debra Lewis, Jim Litch, Bridget Lynch, Tekle-Ab Mekbib, Zahida Qureshi, Graciela Salvador-Davila, Marc Sklar, Claudia Vera, and Susana Veraguas.
- Proofreader Mary Lou Austin.
- Illustrator Andri Burhans.

The writing team especially acknowledges and thanks:

- JHPIEGO for permission to use illustrations (Figures 8, 10, 13, 14, 15, 16, 21, and 22) by Kimberly Battista from *Active Management of the Third Stage of Labor: A Demonstration* [CD-ROM].<sup>1</sup>
- American College of Nurse-Midwives for permission to use illustrations (Figures 2, 3, 4, 14, 17, 18, 19, and 27) from *Life-Saving Skills Manual for Midwives, 3<sup>rd</sup> Edition, and Life-Saving Skills Manual for Midwives, Draft, 4<sup>th</sup> Edition*.<sup>2, 3</sup>
- Figures 9, 11, 12, and 23 were copied from Chaparro, C. *Essential delivery care practices for maternal and newborn health and nutrition*. Unit on Child and Adolescent Health / Pan American Health Organization: Washington, DC, 2007. .

## About POPPHI

The Prevention of Postpartum Hemorrhage Initiative (POPPHI) is a USAID-funded, five-year project focusing on the reduction of postpartum hemorrhage, the single most important cause of maternal deaths worldwide. The POPPHI project is led by PATH and includes four partners: RTI International, EngenderHealth, the International Federation of Gynaecology and Obstetrics (FIGO), and the International Confederation of Midwives (ICM).

For more information or additional copies of this report, please contact:

Deborah Armbruster, Project Director, or  
Susheela M. Engelbrecht, Senior Program Officer  
PATH  
1800 K St., NW, Suite 800  
Washington, DC 20006  
Tel: 202.822.0033  
[www.pphprevention.org](http://www.pphprevention.org)

## Acronyms

|        |  |
|--------|--|
| AMTSL  | active management of the third stage of labor          |
| CCT    | controlled cord traction                               |
| DIC    | disseminated intravascular coagulopathy                |
| FIGO   | International Federation of Gynaecology and Obstetrics |
| HLD    | high-level disinfected                                 |
| ICM    | International Confederation of Midwives                |
| IM     | intramuscular  |
| IU     | international units                                    |
| MTCT   | mother to child transmission of HIV/AIDS               |
| PMTCT  | prevention of mother to child transmission of HIV/AIDS |
| POPPHI | Prevention of Postpartum Hemorrhage Initiative         |
| PPH    | postpartum hemorrhage                                  |
| PPPH   | prevention of postpartum hemorrhage                    |
| TTI    | time-temperature indicator                             |
| USAID  | United States Agency for International Development     |
| VVM    | vaccine vial monitor                                   |
| WHO    | World Health Organization                              |



## Introduction

Efforts such as the Safe Motherhood Initiative and the World Health Organization (WHO) Making Pregnancy Safer Division and strategies to meet the United Nations Millennium Development Goals are supporting worldwide activities to reduce maternal and newborn mortality. Despite these efforts, hundreds of thousands of women and babies die or become disabled due to complications of pregnancy and childbirth every year; half of these maternal deaths occur within 24 hours of childbirth.<sup>4</sup>

Postpartum hemorrhage (PPH) is the leading direct cause of maternal death in developing countries and results from problems during and immediately after the third stage of labor.<sup>5</sup> PPH is an **unpredictable** and **rapid** cause of maternal death worldwide, with two-thirds of women with PPH having no identifiable risk factors. Seventy to ninety percent of immediate PPH is attributed to uterine atony (failure of the uterus to properly contract after birth).<sup>6, 7</sup>

Fortunately, research shows that using simple, low-cost interventions can help avoid most of these tragic outcomes. Current evidence indicates active management of the third stage of labor (administration of uterotonic drugs, controlled cord traction, and fundal massage after delivery of the placenta) can reduce the incidence of postpartum hemorrhage by up to 60 percent in situations where:

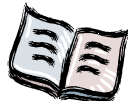
- National guidelines support the use of active management of the third stage of labor (AMTSL).
- Health workers receive training in using AMTSL and administering uterotonic drugs.
- Injection safety is ensured.
- Necessary resources (uterotonic drugs and cold chain for storage of uterotonic drugs; equipment, supplies, and consumables for infection prevention and injection safety) are available.<sup>8</sup>

Ongoing research in various settings continues to identify the best approaches for preventing and managing postpartum bleeding and its complications. By developing national guidelines, training skilled birth attendants, improving work environments of skilled providers, and supporting the development of improved access to care, more women will have access to this life-saving intervention.

### About the learning materials

POPPHI developed a learning package on the prevention of postpartum hemorrhage consisting of a reference manual, participant's notebook, and facilitator's guide. This learning package was developed for use by nurses, midwives, and doctors providing childbirth and immediate postpartum care.

Information about implementing AMTSL is featured in this reference manual as well as the corresponding participant's notebook and facilitator's guide. These documents comprise a set and should be used together. These resources are distinguished within the series by a corresponding icon located at the top of the right hand page:



*Facilitator's guide*



*Participant's notebook*



This course is designed to be utilized for in-service training, with the overall objective of providing updates about AMTSL use to equip nurses, midwives, and clinical and health workers to carry out the following:

- Provide safe, respectful, and friendly care to women, newborns, and their families. Women and families will then be more likely to utilize the health care system with confidence because they know they will receive competent, compassionate care.
- Follow an evidence-based protocol for safe care during active management of the third stage of labor and during the immediate postpartum period, including clear guidelines on when to refer mothers with complications, ensuring timely action is taken.
- Provide greater protection from infection for their clients and themselves.
- Store uterotonics correctly to maintain their potency.

This course offers participants knowledge and skills to provide the crucial care needed to prevent PPH, improve clinical services, and train other providers.



## References

- 
- <sup>1</sup> Gomez P, Kinzie B, Metcalfe G. *Active Management of the Third Stage of Labor: A Demonstration* [CD-ROM]. Baltimore, MD: JHPIEGO; 2005.
- <sup>2</sup> Marshall M, Buffington ST. *Life-Saving Skills Manual for Midwives*. 3rd edition. Washington, DC: American College of Nurse-Midwives; 1998.
- <sup>3</sup> Marshall M, Buffington ST, Beck D, Clark A. *Life-Saving Skills Manual for Midwives*. Unpublished 4<sup>th</sup> edition. Washington, DC: American College of Nurse-Midwives; 2007.
- <sup>4</sup> World Health Organization (WHO) *Mother-Baby Package: Implementing Safe Motherhood in Countries*. WHO/FHE/MSM/94.11. Geneva: WHO; 1994.
- <sup>5</sup> AbouZahr C. Antepartum and postpartum haemorrhage. In: Murray CJL, Lopez AD, eds. *Health Dimensions of Sex and Reproduction*. Boston, MA: Harvard University Press; 1998:165–190.
- <sup>6</sup> Stephenson P. Active Management of the Third Stage of Labor: A Simple Practice to Prevent Postpartum Hemorrhage. USAID Global Health Technical Brief. June 2005. MAQ website. Available at: <http://www.maqweb.org/techbriefs/tb13activemgmt.shtml>. Accessed April 2, 2007.
- <sup>7</sup> World Health Organization (WHO). *Biennial Report 2000–2001: Research on Reproductive Health at WHO*. Geneva: WHO; 2002. Available at: [http://www.who.int/reproductive-health/publications/biennial\\_reports/2000-01/Chapter\\_2.PDF](http://www.who.int/reproductive-health/publications/biennial_reports/2000-01/Chapter_2.PDF). Accessed April 2, 2007.
- <sup>8</sup> Prendiville WJ, Harding JE, Elbourne DR, Stirrat GM. The Bristol third stage trial: active versus physiological management of the third stage of labour. *British Medical Journal*. 1988;297: 1295–1300.